

### **ABSTRACT OF THE DISCLOSURE**

**[0170]** Methods of detecting a component of interest, a change in charge, a pH, a cellular response using nanosensors are provided. Nanosensors, including nanowires and nanowire arrays comprising functionalized and/or non-functionalized nanowires are provided. Nanosensors are used for detection in cellular fragmentation, multiple concentration analysis, glucose detection, and intracellular analysis.